

Serial No.: 10/553,860

Examiner: David J. Goodwin

Title: FIELD EFFECT TRANSISTOR, ELECTRICAL ELEMENT ARRAY, AND MANUFACTURING METHOD FOR THE SAME

Page 2 of 4

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DEC 21 2007****Amendments to the Claims:**

This listing of claims will replace all prior versions, and listing, of claims in the application.

1-19. (Canceled)

20. (Currently amended) A method for manufacturing an electrical element array including [[a]] n-type field effect transistors ~~transistor~~ and [[a]] p-type field effect transistor ~~transistors~~ on a substrate, comprising the steps of:

forming a plurality of gate electrode ~~electrodes~~ on a substrate;

forming a gate insulation layer on the gate ~~electrode~~ electrodes;

forming a plurality of source electrode ~~electrodes~~ and a plurality of drain electrode ~~electrodes~~ on the gate insulation layer;

forming a plurality of p-type field effect transistors on the substrate by applying a p-type semiconductor layer comprising carbon nanotube on the gate insulation layer and between one of the source electrodes ~~electrode~~ and one of the drain electrodes ~~electrode~~ so as to form a plurality of p-type field effect transistors on the substrate; and

forming a n-type modifying polymer layer only on the p-type semiconductor layer of a p-type field effect transistor that is included in the plurality of plural p-type field effect transistors and that should be converted into a n-type field effect transistor by dispensing in an ink-jet method, the n-type modifying polymer layer being for converting a polarity of the carbon nanotube from an original polarity of p-type into n-type and for stabilizing the polarity, whereby the p-type semiconductor layer of the p-type field effect transistor is converted into a n-type semiconductor layer so as to form [[a]] p-type field effect transistors ~~transistor~~ and [[a]] n-type field effect transistors ~~transistor~~ on the substrate.

21. (Currently amended) The method for manufacturing an electrical element array ~~a field-effect transistor~~ according to claim 20, wherein the n-type modifying polymer is a polymer containing imine nitrogen.

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Page 3 of 4

22. (Currently amended) The method for manufacturing an electrical element array a ~~field-effect transistor~~ according to claim 21, wherein the polymer containing imine nitrogen is polyalkylene imine.

23. (Currently amended) The method for manufacturing an electrical element array a ~~field-effect transistor~~ according to claim 22, wherein the polyalkylene imine is at least one selected from the group consisting of polyethylene imine, polypropylene imine and polybutylene imine.